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ABSTRACT

The reading and mathematics objectives of the Georgia Criterion-Referenced Tests for Grade 4 are described. In reading, objectives are defined for: (1) literal comprehension, the understanding of information explicitly stated in the materials; (2) inferential comprehension, the understanding of information not literally expressed; and (3) problem solving. In mathematics, objectives are defined for areas of: (1) concept identification, the basic vocabulary of mathematics and the interrelationships of different kinds of numbers; (2) component operations, focusing on addition, subtraction, multiplication, division, and the use of units of measurement; and (3) problem solving. For each objective, assessment characteristics are given to define the content appropriate to the grade level. Sample questions accompany each objective. (SLD)

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GEORGIA CRITERION-REFERENCED TESTS

4TH GRADE CRITERION-REFERENCED TEST
(3rd Edition)

OBJECTIVES AND ASSESSMENT CHARACTERISTICS

Division of Standards and Assessment
Student Assessment Unit
Georgia Department of Education
May, 1983

TM012655

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4TH GRADE CRT: READING OBJECTIVES

Literal Comprehension

The literal comprehension skill area tests the student's understanding of information explicitly stated in written material. This category requires the student to identify, interpret, and recognize explicit information and to follow directions in the context of academic tasks and everyday situations.

OBJECTIVE 1: THE STUDENT DISTINGUISHES BETWEEN FACT AND OPINION IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces objective 13; matches 8th grade objective 1, BST indicator 1)

OBJECTIVE 2: THE STUDENT RECOGNIZES EXPLICITLY STATED MAIN IDEAS, DETAILS, SEQUENCES OF EVENTS, AND CAUSE AND EFFECT RELATIONSHIPS IN THE CONTEXT OF ACADEMIC MATERIALS, NARRATIVE PROSE OR EVERYDAY ACTIVITIES. (Replaces objectives 12, 16, 19; matches 8th grade objective 2, BST indicator 2)

OBJECTIVE 3: THE STUDENT INTERPRETS INSTRUCTIONS IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Does not replace any 4th grade objectives; matches 8th grade objective 3, BST indicator 3)

Inferential Comprehension

The inferential comprehension skill area tests the student's understanding of information which is not expressed literally in written materials. Inferential comprehension items require the student to recognize and interpret implicitly stated information in the context of academic tasks and everyday situations.

OBJECTIVE 4: THE STUDENT RECOGNIZES IMPLICITLY STATED MAIN IDEAS, DETAILS, SEQUENCES OF EVENTS, AND CAUSE AND EFFECT RELATIONSHIPS IN THE CONTEXT OF ACADEMIC MATERIALS, NARRATIVE PROSE, OR EVERYDAY ACTIVITIES. (Replaces objectives 12, 16, 19; matches 8th grade objective 4, BST indicator 4)

OBJECTIVE 5: THE STUDENT INTERPRETS SEMANTIC AND SYNTACTIC RELATIONSHIPS IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces objectives 6, 8, 9, 11, 20; matches 8th grade objective 5; part of BST 5)

OBJECTIVE 6: THE STUDENT CLASSIFIES WORDS IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces objectives 14 and 15; no related 8th grade or BST)

Problem Solving

The problem solving skill area tests the student's skill at locating, recognizing, interpreting, and evaluating information in its various forms and sources.

OBJECTIVE 7: THE STUDENT MATCHES SIMILAR SOUNDS REPRESENTED BY LETTERS IN THE CONTEXT OF WORDS. (Replaces objectives 2, 3, 5; no related 8th grade or BST)

OBJECTIVE 8: THE STUDENT USES INFORMATION IN REFERENCE SOURCES IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces objective 18; matches 8th grade objective 8, BST indicators 8, 12)

OBJECTIVE 9: THE STUDENT MAKES GENERALIZATIONS AND DRAWS CONCLUSIONS IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces parts of objectives 12, 19; matches 8th grade objective 9, BST indicator 9)

OBJECTIVE 10: THE STUDENT MAKES PREDICTIONS AND COMPARISONS IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces part of objective 19; matches 8th grade objective 10, BST indicator 10)

OBJECTIVE 11: THE STUDENT RECOGNIZES THE RELEVANCE OF DATA IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces part of objective 12; matches 8th grade objective 11, BST indicator 11)

4TH GRADE CRT: MATHEMATICS OBJECTIVES

Concept Identification

Objectives for this skill area concern the basic vocabulary of mathematics and the interrelationships of different kinds of numbers.

OBJECTIVE 1: THE STUDENT RECOGNIZES DIFFERENT NAMES FOR WHOLE NUMBERS AND FRACTIONS IN THE CONTEXT OF ACADEMIC TASKS AND EVERYDAY SITUATIONS. (Replaces objectives 1, 2, 3; matches parts of 8th grade objective 1, BST indicator 1)

OBJECTIVE 2: THE STUDENT IDENTIFIES RELATIONS AND PROPERTIES OF SETS OR NUMBERS IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces parts of objectives 1, 9, 11; matches parts of 8th grade objective 2, BST indicator 2)

OBJECTIVE 3: THE STUDENT IDENTIFIES SETS OF POINTS AND THEIR RELATIONS AND PROPERTIES IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces objectives 10, 12, 13, 14; matches 8th grade objective 4, BST indicators 4, 5)

OBJECTIVE 4: THE STUDENT SELECTS CUSTOMARY OR METRIC UNITS TO MEASURE LENGTH, AREA, VOLUME, WEIGHT, TIME, AND TEMPERATURE IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces parts of objective 15; matches 8th grade objective 3, BST indicator 3)

Component Operations

Objectives for this skill area involve actions on numbers. This skill area focuses on addition, subtraction, multiplication, and division as well as on using units of measurement.

OBJECTIVE 5: THE STUDENT DETERMINES AMOUNTS OF MONEY IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces parts of objectives 15, 16; matches parts of 8th grade objective 7, BST indicator 8)

OBJECTIVE 6: THE STUDENT APPLIES CUSTOMARY OR METRIC UNITS OF MEASURE TO DETERMINE LENGTH, AREA, VOLUME, WEIGHT, TIME, AND TEMPERATURE IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces parts of objective 16; matches 8th grade objective 7, BST indicator 9)

OBJECTIVE 7: THE STUDENT COMPUTES WITH WHOLE NUMBERS AND FRACTIONS IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces objectives 5, 6, 7, 8; matches parts of 8th grade objective 6, BST indicator 7)

Problem Solving

Objectives in this skill area require the student to apply the appropriate concepts and/or operations necessary to solve unique problems.

OBJECTIVE 8: THE STUDENT ESTIMATES RESULTS IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces objective 17; matches 8th grade objective 12, BST indicator 10)

OBJECTIVE 9: THE STUDENT SELECTS THE APPROPRIATE OPERATION FOR A GIVEN PROBLEM SITUATION IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces objectives 4, 6; matches 8th grade objective 8, BST indicator 11)

OBJECTIVE 10: THE STUDENT SOLVES SIMPLE WORD PROBLEMS IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces parts of objectives 4, 7; matches 8th grade objective 9, BST indicator 12)

OBJECTIVE 11: THE STUDENT ORGANIZES DATA IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces objectives 11, 18; matches 8th grade objective 10, BST indicator 13)

OBJECTIVE 12: THE STUDENT INTERPRETS DATA WHICH HAS BEEN ORGANIZED IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces objectives 19, 20; matches 8th grade objective 11, BST indicator 14)

ASSESSMENT CHARACTERISTICS
READING

4TH GRADE CRT: READING OBJECTIVES

Skill Area: Literal Comprehension

OBJECTIVE 1: THE STUDENT DISTINGUISHES BETWEEN FACT AND OPINION IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces objective 13; matches 8th grade objective 1, BST indicator 1)

Assessment Characteristics:

A fact is an objective statement which can be determined to be accurate or inaccurate using standard measurement systems such as the metric system, sensory data, or definitions. An opinion is an evaluative statement expressing individual preferences, beliefs, or feelings. The items do not test the truth or falsity of factual statements. If a passage is used, the facts and opinions are related to the passage.

Example for Objective 1:

This example shows how four options can create a dialogue.

Steven and Tommy were talking at recess. Which of the following is an OPINION?

A. "I saw the gorilla movie on TV."
B. "I saw the movie, too."
* C. "It was really scary!"
D. "My mom made me stop watching it."

OBJECTIVE 2: THE STUDENT RECOGNIZES EXPLICITLY STATED MAIN IDEAS, DETAILS, SEQUENCES OF EVENTS AND CAUSE AND EFFECT RELATIONSHIPS IN THE CONTEXT OF ACADEMIC MATERIALS, NARRATIVE PROSE OR EVERYDAY ACTIVITIES. (Replaces objectives 12, 16, 19; matches 8th grade objective 2, BST indicator 2)

Assessment Characteristics:

The main idea states the major point or purpose of the passage. The details and sequences of events selected for item content must be necessary or relevant to overall passage comprehension. Cause-effect reflects the relationship between two events, people, or situations. Use of relational words, such as "then," "as a result of," "therefore," indicates a cause-effect relationship. Answers for these items are directly stated in the passage.

Example(s) for Objective 2:

The Sahara Desert is located in the northern part of Africa. A desert is sandy land that is so dry that almost nothing will grow there. In the daytime, it is very hot. At night, it is very cold.

The people who live in the desert travel by camel. Most desert people live near the places where there is water. These places are called oases.

Date palm trees grow at the oases. These trees give food. They also give materials for making furniture, floors, and roofs for houses. The leaves of the palm can even be woven into rugs.

Even though desert life is very hard, many people live in deserts. The desert is their home.

(main idea)

Which title best tells what the passage is about?

A. Famous Oases
* B. Life in a Desert
C. How Camels Travel
D. How to Grow Palm Trees

(main idea)

What is the main idea of the passage?

A. The Sahara Desert is located in Africa.
B. Date palm trees grow in oases.
* C. Many people live in deserts.
D. Desert people travel by camel.

(detail)

The weather in the desert

* A. is cold at night.
B. has four seasons like we do.
C. is good for growing crops.
D. is very damp.

OBJECTIVE 3: THE STUDENT INTERPRETS INSTRUCTIONS IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Does not replace any 4th grade objective; matches 8th grade objective 3, BST indicator 3)

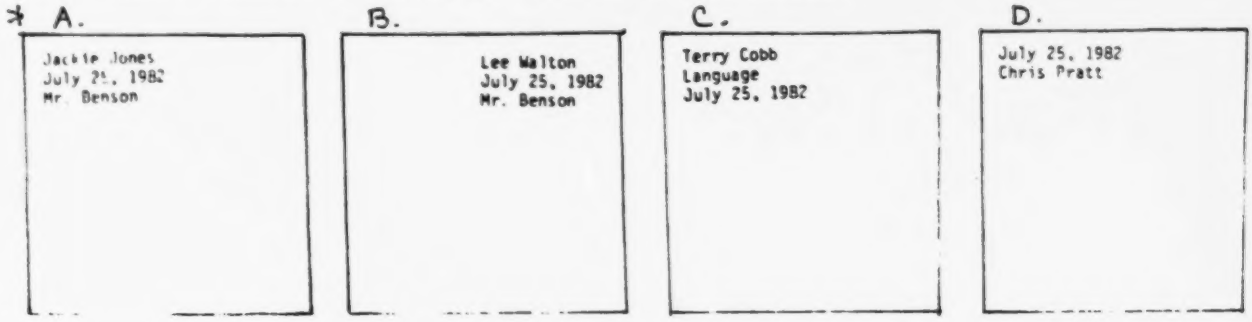
Assessment Characteristics:

The emphasis for these items is application rather than terminology. The items require the student to use instructions or other directive information to complete a task. Directions may be presented in narrative form (prose), lists, or steps and may include such things as forms, labels, or diagrams.

Example(s) for Objective 3:

(prose)

Mr. Benson told his class to put their names in the upper left corner of the page. Then they should put the date, and the teacher's name below that. Which student followed Mr. Benson's directions?



Skill Area: Inferential Comprehension

OBJECTIVE 4: THE STUDENT RECOGNIZES IMPLICITLY STATED MAIN IDEAS, DETAILS, SEQUENCES OF EVENTS, AND CAUSE AND EFFECT RELATIONSHIPS IN THE CONTEXT OF ACADEMIC MATERIALS, NARRATIVE PROSE OR EVERYDAY ACTIVITIES. (Replaces objectives 12, 16, 19; matches 8th grade objective 4, BST indicator 4)

Assessment Characteristics:

Implicitly stated information can be thought of as that information contained "between the lines" of a passage. The main idea states the major point or purpose of the passage. The details and sequences of events selected for item content are necessary or relevant to overall passage comprehension. Cause-effect items are based on the relationships between two events or happenings.

Example(s) for Objective 4:

A folk tale tells about a man named Daedalus who got into an argument with the king of an island. The king put Daedalus and his son in a prison tower. Guards kept watch to make sure they did not leave.

One day, while watching some birds flying, Daedalus thought of a way to escape. He told his son to pick up all the feathers he could find. When they had enough feathers, Daedalus went to work.

He found some wax and melted it. Then he shaped the wax into two sets of wings and covered the wax with feathers. When the wings were finished, Daedalus and his son put them on and flew from the island.

(main idea)

Which title best tells what the tale is about?

*A. The Escape
B. The Guard's Job
C. Many Uses of Feathers
D. Folk Stories

(cause-effect)

Daedalus was kept a prisoner because he:

A. hid from the guards
*B. made the king angry
C. killed some birds
D. hurt the king's son

OBJECTIVE 5: THE STUDENT INTERPRETS SEMANTIC AND SYNTACTIC RELATIONSHIPS IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces objectives 6, 8, 9, 11, 20; matches 8th grade objective 5, part of BST 5)

Assessment Characteristics:

Appropriate items involve either semantic relationships (e.g., denotative meanings) or syntactic relationships (e.g., recognizing appropriate word forms and/or word order) in sentences. Items may require the student (1) to interpret words from context; (2) to interpret or select prefixes, suffixes, or roots when an appropriate example is given or to identify the effect that an affix has on a word; or (3) to match pronouns to their referents. Other appropriate items may require the student (4) to match two or more sentences with an equivalent, i.e., paraphrased sentence. These types of items may require the student to interpret punctuation in order to select a statement equivalent in meaning. Also, the student may be asked (5) to select the appropriate word to complete a sentence.

Example(s) for Objective 5:

(semantics)

Jim liked to clown around.

The sentence means that Jim liked to be:

A. quiet
B. sad
*C. funny
D. tired

After playing hard but losing the game anyway, Joan said, "Well, that's the way the ball bounces."

What did Joan mean by "that's the way the ball bounces?"

A. Balls without enough air in them won't bounce.
*B. Sometimes, even when you try hard, things don't work out the way you want them to.
C. You can't tell in which direction a ball will bounce.
D. Joan played hard but forgot to bounce the ball right.

John lost his glasses on Tuesday, but he found them on Wednesday while playing games with Sam and Bill in the school yard.

In the box above, he means:

A. glasses
B. Bill
*C. John
D. Sam

OBJECTIVE 6: THE STUDENT CLASSIFIES WORDS IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces objectives 14 & 15; no related 8th grade or BST).

Assessment Characteristics:

The basis for classification into categories is stated within the item or clearly implied. An item may require the student to identify the attribute that is the basis for the classification.

Example for Objective 6:

Monday, Tuesday, Friday are all:

A. birthdays
B. holidays
C. months of the year
*D. days of the week

Skill Area: Problem Solving

OBJECTIVE 7: THE STUDENT MATCHES SIMILAR SOUNDS REPRESENTED BY LETTERS IN THE CONTEXT OF WORDS. (Replaces objectives 2, 3, 5; no related 8th grade or BST).

Assessment Characteristics:

Items may include long and short vowels, or -R, -L, -W controlled vowels; diphthongs such as oy, ow; diagraphs such as ie, ou, au, gn, ph, gh; blends such as tr, ch. Words selected must be from the first 500 third grade words on the American Heritage Word List.

Example for Objective 7:

Which word has the same sound as ou in the word tough?

A. round
B. through
*C. rough
D. dough

OBJECTIVE 8: THE STUDENT USES INFORMATION IN REFERENCE SOURCES IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces objective 18; matches 8th grade objective 8, BST indicators 8, 12)

Assessment Characteristics:

Items may include determining which source to use or how to use a particular source (e.g., encyclopedia, book of maps). Items may require students to use tables of contents, glossaries, card catalogues, or indexes to locate information. Students may be asked to recognize the use of a dictionary for selecting appropriate meanings of words and finding synonyms or antonyms, or using pronunciation guides.

Example for Objective 8:

(dictionary)

Which set of guide words would appear on the page where you would find the word gruff?

A. get-goat
B. good-grim
*C. grin-gum
D. gutter-hang

OBJECTIVE 9: THE STUDENT MAKES GENERALIZATIONS AND DRAWS CONCLUSIONS IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces objectives 12, 19; matches 8th grade objective 9, BST indicator 9)

Assessment Characteristics:

The student is asked to determine a possible result based on information given. Conclusion items require the student to use multiple pieces of information to determine a specific result which brings closure to a passage. Generalization items require a special type of conclusion that may be applied to questions, points in time, people and events other than those described in the passage.

Example(s) for Objective 9:

All day long, every day, Laura and John are busy. When their inside chores are done, there are lots of other things to see and do outside.

They hunt for birds' nests in the tall grass, and when they find them, the mother birds squawk and scold. John and Laura go quietly away so they don't worry the mother birds so much.

Laura and John like to look for frogs down by the pond. The frogs are hard to catch when they jump away. Sometimes Laura and John go swimming at one end of the pond where there is a sandy beach.

(generalization)

According to the passage, Laura and John like to do many things. Which of the following might they also like to do?

A. watch TV
B. do chores
*C. row a boat
D. sit quietly

(conclusion)

According to the passage, Laura and John like to:

A. be lazy
*B. play outside
C. go to town
D. help Mother

OBJECTIVE 10: THE STUDENT MAKES PREDICTIONS AND COMPARISONS IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces objective 19; matches 8th grade objective 10, BST indicator 10)

Assessment Characteristics:

Prediction implies a future event; a degree of probability exists. Given the details of the passage, the prediction should be a likely (but not actual) result. Comparison involves characteristics of events, people or situations which may be similar or different. Comparison items may require the identification of a statement of comparison based on a specified dimension (e.g., expense, time).

Example for objective 10:

The Sahara Desert is located in the northern part of Africa. A desert is sandy land that is so dry that almost nothing will grow there. In the daytime, it is very hot. At night, it is very cold.

The people who live in the desert travel by camel. Many desert people live near the places where there is water. These places are called oases.

Date palm trees grow at the oases. These trees give food. They also give materials for making furniture, floors, and roofs for houses. The leaves of the palm can even be woven into rugs. Even though desert life is very hard, many people live in deserts. The desert is their home.

(comparison)

Based on the passage, how does the weather in Georgia compare to that in the desert?

*A. Georgia has more rain than the desert.
B. The desert is not as hot as Georgia.
C. The desert has more cloudy days.
D. Georgia has fewer trees than the desert.

OBJECTIVE 11: THE STUDENT RECOGNIZES THE RELEVANCE OF DATA IN THE CONTEXT OF ACADEMIC MATERIALS OR EVERYDAY ACTIVITIES. (Replaces objective 12; matches 8th grade objective 11, BST indicator 11)

Assessment Characteristics:

Items require the student to identify relevant or irrelevant information for a specific problem. The student may be asked (1) to identify what additional information may be necessary to solve the problem, (2) to identify what information was required for arriving at a specific solution, and (3) to interpret the importance of data for a specified decision or task.

Example for objective 11:

Kerry wanted to earn some money selling lemonade. He knew how much his paper cups would cost. He knew how much the paper would cost for his sign. The materials for the lemonade stand were in the garage, so he wouldn't have to buy any. What else does Kerry need to know before he can decide how much to charge for his lemonade?

A. how much wood he needs
B. how many cups of lemonade he wants to sell
C. the cost of the hammer to build the stand
*D. the cost of the lemonade

ASSESSMENT CHARACTERISTICS
MATHEMATICS

4TH Grade CRT: Mathematics Objectives

Skill Area: Concept Identification

OBJECTIVE 1: THE STUDENT RECOGNIZES DIFFERENT NAMES FOR WHOLE NUMBERS AND FRACTIONS IN THE CONTEXT OF ACADEMIC TASKS AND EVERYDAY SITUATIONS. (Replaces objectives 1, 2, 3; matches parts of 8th grade objective 1, BST indicator 1)

Assessment Characteristics:

Items for this objective may ask the student to: (1) express whole numbers in a variety of ways; (2) determine the number of members of a set; (3) recognize a numeral written in expanded notation; (4) read and identify whole numbers through one million; (5) identify the place value for a given digit in a given number; (6) identify what part of a set or diagram is shaded (appropriate fractions are halves, thirds, fourths, fifths, sixths, eighths, tenths, and twelfths when part of a dozen); (7) interpret region models of fractions, decimals, or whole numbers (limit decimals to money); and (8) identify equivalent fractions using region models for 1/2's and 1/4's.

Example(s) for objective 1:

Four thousand eight hundred ten is written

A. 4,000,810
B. 481,000
*C. 4,810
D. 4,081

Which names the part shaded?

1. $\frac{1}{3}$

*2. $\frac{2}{4}$

3. $\frac{2}{3}$

4. $\frac{5}{6}$

In 215,000 the 5 is in which place?

A. Hundreds
*B. Thousands
C. Ten thousands
D. Hundred thousands

OBJECTIVE 2: THE STUDENT IDENTIFIES RELATIONS AND PROPERTIES OF SETS OR NUMBERS IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces parts of objectives 1, 9, 11; matches parts of 8th grade objective 2, BST indicator 2)

Assessment Characteristics:

Appropriate items for this objective may require the student to:

(a) compare whole numbers (symbols for less than or greater than may be used).
(b) identify the largest or smallest number.
(c) identify which number is closest to a given number.
(d) deal with ordinal numbers (up to "twelfth").
(e) identify a subset for a given set or identify which set is in a one-to-one correspondence to a given set.
(f) compare--using the symbols of less than or greater than--like fractions (thirds, fourths, halves). A number line or fraction bar may be given as part of the stimulus material. Unit values of proper fractions may be compared across denominators, e.g., 1/3 to 1/4 but not 2/3 to 3/4.
(g) compare fractions (halves, thirds, fourths) to whole numbers.
(h) determine a pair of numbers given a relation.
(i) find a missing element given a relation and one number of a pair. Items using non-numerical relations (e.g., is a brother of, is taller than, or to the left of) are also included.
(j) determine a relation given pairs of numbers.
(k) find a missing element of a number pair by determining a relation from at least 3 given pairs of numbers.
(l) complete a given sequence of numbers--(1) missing numbers may be at the beginning, end, or middle of the sequence.
(2) appropriate sequences may require counting by ones, twos, threes, fives, tens, or hundreds.
(m) identify properties of zero and one.
(n) identify even and odd numbers.
(o) identify the factors or multiples of a number.
(p) choose which symbol (<, >, or =) should be used to make a true mathematical statement.

Examples(s) for objective 2:

Which is the greatest number that can be written using the digits 3, 7, and 4?

1. 374
2. 347
3. 437
***4. 743**

Bob is taller than John and shorter than Linda. Which is true?

***1. Linda is taller than John.**
2. Linda is shorter than John.
3. Linda is the same height as John.
4. Linda is shorter than Bob.

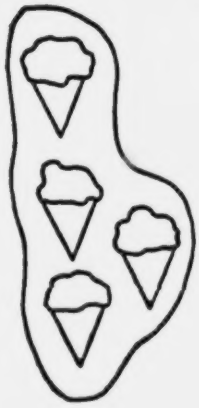
Example(s) for Objective 2 (cont'd):

In which set is there an ice cream cone for each child above?

1.

2.

3.

*4. 

If $\square + \triangle = 9$ is true, which pair of numbers could be $\square$ and $\triangle$?

1. 3 and 5
*2. 3 and 6
3. 5 and 5
4. 7 and 3

If $7 \times \square = 0$, then $\square$ =

*1. 0
2. 1
3. 7
4. 70

OBJECTIVE 3: THE STUDENT IDENTIFIES SETS OF POINTS AND THEIR RELATIONS AND PROPERTIES IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces objectives 10, 12, 13, 14; matches 8th grade objective 4, BST indicators 4, 5)

Assessment Characteristics:

Items may require the student to:

(a) identify standard geometric shapes. Appropriate geometric shapes include both plane and solid figures such as:

-triangle	-open curve	-pyramid
-square	-closed curve	-line segment
-rectangle	-cone	-circle
-angle	-cylinder	-diameter
-line	-cube	-radius

(b) locate points on a Cartesian plane.

(c) focus on geometric relations. Relations include:

-parallel	-inside
-perpendicular	-outside
-right angle	-same size as
-intersecting	

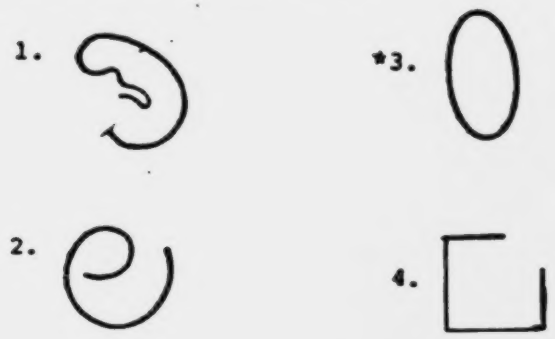
(d) identify a shape that has been transformed. Appropriate transformations include rotation, stretching, shrinking, reflection, and translation.

(e) select a line of symmetry for a given figure or determine the number of lines of symmetry for a given figure.

(f) sort and classify objects according to similarities or differences. The objects may be sorted according to color, shape, size, thickness, use, etc.

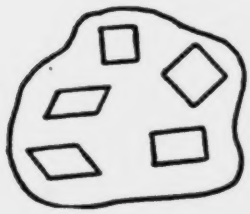
Example(s) for objective 3:

Which is a closed curve?



Which are parallel?

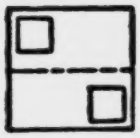
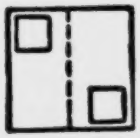
Example(s) for Objective 3 (cont'd):



(0407)
Which shape belongs to the set above?

1. 2. *3. 4.

Which can be folded along the dotted line to make one square fit on top of the other?

*1. 2.  3. 4. 

Which is a square?

1. 3.

2. *4.

OBJECTIVE 4: THE STUDENT SELECTS CUSTOMARY OR METRIC UNITS TO MEASURE LENGTH, AREA, VOLUME, WEIGHT, TIME, AND TEMPERATURE IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces parts of objective 15; matches 8th grade objective 3, BST indicator 3)

Assessment Characteristics:

Items focus on choosing the unit that applies to a specific measurement problem such as selecting the appropriate type of unit or size of unit. It is not suitable to use conversions within or between systems of measurement. Appropriate units include:

grams	feet	pints	minutes
meters	yards	quarts	hours
liters	miles	gallons	days
Celsius	ounces	Fahrenheit	weeks
inches	pounds	seconds	months

The prefixes milli-, centi-, and kilo- are appropriate. Volume items may include cubic measures or measures of capacity. Metric symbols m, km, cm, mm, are used in the options. However, the words meter, etc., are spelled out in the item stems.

Example(s) for objective 4:

Which could have a measure of 75 degrees?

*1. temperature of a room
2. length of a shelf
3. volume of a box
4. area of a rug

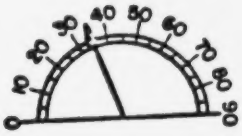
A fourth grader could be how tall?

1. 4 inches
*2. 4 feet
3. 4 centimeters
4. 4 meters

Example(s) for Objective 4 (cont'd):

Which is used to find how much water the teapot above holds?

*1.

2. 

3.

4.

Skill Area: Component Operations

OBJECTIVE 5: THE STUDENT DETERMINES AMOUNTS OF MONEY IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces parts of objectives 15, 16; matches parts of 8th grade objective 7, BST indicator 8)

Assessment Characteristics:

Items for this objective may ask the student to read amounts of money, recognize equal amounts of money, and add money or determine amounts of money by counting given representations of coins (sums should be less than $20 and numerical presentations should be vertical only). Appropriate denominations are penny, nickel, dime, quarter, half-dollar, one-dollar bill. Some typical problem situations involving the use of money are finding the correct change, determining how much more is needed, and finding the amount per share when sharing equal amounts.

NOTE: Student skill with decimals is assessed in the context of money only.

Example(s) for objective 5:

How much money is shown?

1. $ .23
*2. $ 2.03
3. $ 2.30
4. $20.30

Example(s) for Objective 5 (cont'd):

Seventy-two dollars and fourteen cents is written

1. $721.04
*2. $ 72.14
3. $ 14.72
4. $ 7.214

OBJECTIVE 6: THE STUDENT APPLIES CUSTOMARY OR METRIC UNITS OF MEASURE TO DETERMINE LENGTH, AREA, VOLUME, WEIGHT, TIME, AND TEMPERATURE IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces parts of objective 16; matches 8th grade objective 7, BST indicator 9)

Assessment Characteristics:

Appropriate units for this objective are:

inch	meter	ounce	liter
foot	kilometer	kilogram	day
yard	square inch	cup	week
mile	cubic inch	quart	month
centimeter	pound	gallon	nonstandard units of measurement

The symbols m, km, cm, etc., are used in options. However, the words meter, etc., are spelled out in item stems. Items may require the student to find the length, area or volume of a given figure or to choose which everyday object is the longest, heaviest, etc.

Length items may ask the student to determine the length of an object, given a ruler; identify the longest or shortest object, given a set of common objects; and find the perimeter of a figure on a grid.

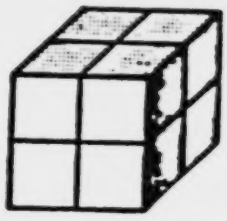
Area items may ask the student to find the area of a figure on a grid or the shaded portion (which may be triangular) of a grid (use of formulas is not included).

Volume items may require the student to find the volume of a rectangular prism by counting cubes.

Time items may ask the student to tell time using a drawing of a clock, determine the amount of time elapsed (clocks may or may not be given as stimulus material), and use a calendar.

Temperature items should focus on reading temperature scales in either Fahrenheit or Celsius.

Example(s) for objective 6:

How many will make  ?

1. 4
*2. 8
3. 12
4. 24

Example(s) for Objective 6 (cont'd):

The first clock shows when Pete left home. The second clock shows when Pete got home. How many hours was he gone?

*1. 2
2. 3
3. 4
4. 7

OBJECTIVE 7: THE STUDENT COMPUTES WITH WHOLE NUMBERS AND FRACTIONS IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces objectives 5, 6, 7, 8; matches parts of 8th grade objective 6, BST indicator 7)

Assessment Characteristics:

The purpose of this objective is to measure the student's ability to add, subtract, multiply, and divide whole numbers; to add and subtract fractions, and to add or subtract decimals (restricted to hundredths presented vertically). Problems for whole numbers or fractions may be presented horizontally or vertically. Items may focus on the properties of operations. Appropriate properties are commutative, associative, distributive, and the properties of zero and one. Inverse operations are also included. These items are not vocabulary items, but applications.

The following types of numbers or problems are appropriate:

(a) Whole numbers- (1) basic addition facts, (2) basic subtraction facts, (3) basic multiplication facts through products of 81, (4) basic division facts through dividends of 81, (5) two addends of four digits or less (with or without regrouping), (6) five addends of one digit (with or without regrouping), (7) subtraction problems with either or both numerals up to four digits (with or without regrouping), (8) multiplication of a three-digit number by a one-digit number, (9) multiplication of a two-digit number by a two-digit number, (10) division of a three-digit number by a one-digit number (with or without a remainder), and (11) division of a three-digit number of a multiple of 10 (with or without a remainder).

(b) Fractions- (1) may use halves, thirds, fourths, fifths, sixths, eighths, tenths, twelfths; (2) add like common fractions (1/2, 1/3, 1/4, 1/5, 1/6), and (3) subtract like fractions.

(c) Decimals-covered under Objective 5. Student skill with decimals is assessed in the context of money problems only.

Example(s) for objective 7:

$4\overline{)36}$

1. 6
2. 8
*3. 9
4. 12

$$\begin{array}{r} 35 \\ +28 \\ \hline \end{array}$$

1. 513
*2. 63
3. 62
4. 53

$\frac{1}{2} + \frac{2}{2}$

1. $\frac{1}{2}$
2. 1
*3. $\frac{3}{2}$
4. $\frac{3}{4}$

$5\sqrt{43}$ is between

1. 5 and 6
2. 6 and 7
3. 7 and 8
*4. 8 and 9

If $5 \div \square = 1$, then $\square =$

1. 0
2. 1
*3. 5
4. 10

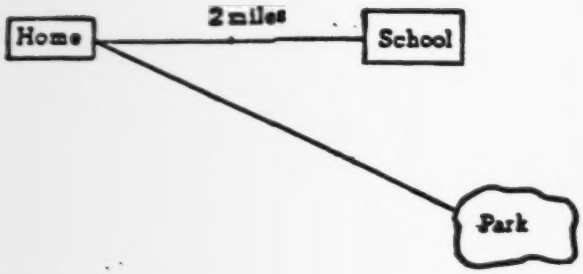
Skill Area: Problem Solving

OBJECTIVE 8: THE STUDENT ESTIMATES RESULTS IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces objective 17; matches 8th grade objective 12, BST indicator 10)

Assessment Characteristics:

This objective focuses on the use of estimation in the planning stages of problem solving. Items may require the student to: (a) estimate the number of units, either standard or nonstandard, contained in a figure; (b) make comparisons of measurements using "a little more than," "smaller than," "about how far," etc. If the item asks the student to estimate a measurement, dimensions of the space are not supplied. Other items may include using rounded numbers to estimate sums, differences, products, and quotients to help evaluate the reasonableness of a result.

Example(s) for objective 8:

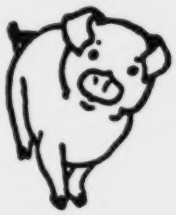


The map above shows how far Ed lives from the school and how far he lives from the park. About how far does he live from the park?

1. about one mile
2. a little less than two miles
3. two miles
*4. more than two miles

Example(s) for Objective 8 (cont'd):

Porky
80 pounds



Pansy

About how much does Pansy weigh?

1. 10 pounds
2. 25 pounds
*3. 150 pounds
4. 500 pounds

OBJECTIVE 9: THE STUDENT SELECTS THE APPROPRIATE OPERATION FOR A GIVEN PROBLEM SITUATION IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces objectives 4, 6; matches 8th grade objective 8, BST indicator 11)

Assessment Characteristics:

The items in this objective may be word problems or physical representations that ask the student to choose the operation needed to solve a problem (limit items to one operation per problem). The options may be written using words or mathematical symbols. The items do not require computations. Items may ask which is the best way to solve a problem for a particular purpose. The purpose must be stated or clearly implied.

Example(s) for objective 9:

How many fish are shown in all the fishbowls?

1. 3 + 2
2. 3 - 2
*3. 3 x 2
4. 3 ÷ 2

4 children have 8 cookies. Each child has an equal share. Which shows how many cookies each child has?

1. 8 + 4 = 12
2. 8 - 4 = 4
3. 8 x 4 = 32
*4. 8 ÷ 4 = 2

OBJECTIVE 10: THE STUDENT SOLVES SIMPLE WORD PROBLEMS IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces parts of objectives 4, 7; matches 8th grade objective 9, BST indicator 12)

Assessment Characteristics:

Problems focus on everyday tasks and include the use of money, simple logical reasoning, and one or two operations with whole numbers. Computation is simple, and solutions are not necessarily numerical results. Problem contexts may include games, travel, sports, and everyday experiences most fourth grade students are likely to encounter.

Example(s) for objective 10:

Marty's mother made 12 funny hats for a party. There were 15 children coming to the party. How many more hats did she have to make?

*1. 3
2. 4
3. 12
4. 15

OBJECTIVE 11: THE STUDENT ORGANIZES DATA IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces objectives 11, 18; matches 8th grade objective 10, BST indicator 13)

Assessment Characteristics:

This objective focuses on the collection and organization of data to facilitate solving a problem. There are two types of problems. The first type presents a set of data and asks the student to select the best arrangement of that data. It may be necessary to organize and summarize the data differently, depending on the nature of the problem to be solved. The best organization of data should reflect those characteristics that are essential for the solution of the problem. The data may be arranged into tables, bar graphs, line graphs, pictographs and circle graphs. The second type of problem focuses on the collection of data as a step required to solve a problem. These items ask the student to identify information necessary to solve the problem or to identify additional information needed for a solution. Items may ask the student which question to use when collecting data for a specified task.

Example(s) for objective 11:

Mr. Stein will take his class to a park if more than half the pupils want to go. Which question should Mr. Stein ask each pupil?

1. How many times have you been to a park?
2. Are there different rides at a park?
3. Which rides do you like best?
*4. Do you want to go to a park?

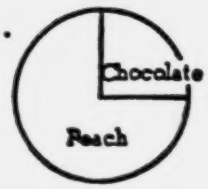
Example(s) for Objective 11 (cont'd):

In a class of 40 students, 30 like chocolate ice cream best and 10 like peach ice cream best. Which graph shows this?

*1.

3.

2.



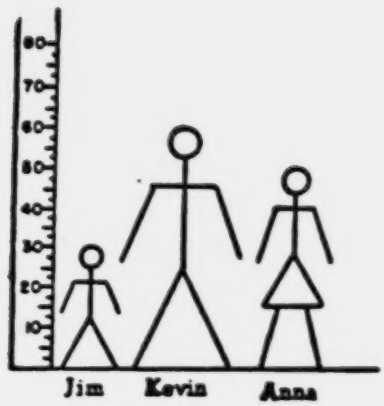
4.

OBJECTIVE 12: THE STUDENT INTERPRETS DATA WHICH HAS BEEN ORGANIZED IN THE CONTEXT OF ACADEMIC TASKS OR EVERYDAY SITUATIONS. (Replaces objectives 19, 20; matches 8th grade objective 11, BST indicator 14)

Assessment Characteristics:

Items from this objective focus on using information contained in tables, graphs and diagrams to solve a problem. Appropriate graphs include bar graphs, line graphs, pictographs and circle graphs. Items may ask the student to simply read the chart or graph, determine the likelihood of a specific event, draw inferences from the data, or make simple predictions based on the data. Probabilities of chance events are expressed uniformly, such as "three chances out of five to get a red marble." Items may require the student to identify events that are most likely, least likely, equally likely, or not likely from a given set of possible outcomes.

Example(s) for objective 12:



From which diagram was the graph made?

1. Jim → tallest, Kevin → middle, Anna → shortest
2. Jim → shortest, Kevin → middle, Anna → tallest
3. Jim → tallest, Kevin → middle, Anna → shortest
*4. Jim → shortest, Kevin → middle, Anna → tallest

Example(s) for Objective 12 (cont'd):

Student	Weight in Pounds
Arthur	55
Betty	53
Carl	54
Donna	59

Which student is the heaviest?

1. Arthur
2. Betty
3. Carl
*4. Donna

2	Green
3	Blue
1	Yellow
9	Red

If these marbles are in a bag and Bob takes one without looking, which color is he MOST LIKELY to get?

1. Blue
2. Green
*3. Red
4. Yellow